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| 09/995,866 | 11/26/2001 | Akira Mase | 0756-2401 | 3786 |

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EXAMINER

NGUYEN, HOAN C

ART UNIT PAPER NUMBER

2871

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/995,866

Applicant(s)

MASE, AKIRA

Examiner

HOAN C. NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-12 is/are pending in the application.
- 4a) Of the above claim(s) 1 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 2-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1101.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

Applicant's arguments with respect to New claims 10-12 have been considered but are moot in view of the new ground(s) of rejection. Therefore, this is Final action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster-Wolden et al. (US4385976) in view of Hart (US4462883).

Schuster-Wolden et al. teach a display device comprising

- a substrate 3, which is conventionally made of glass
- a lead formed over the glass substrate, said lead comprising a first layer 18 and a second layer 17 formed on the first layer.

For printing pattern and low cost, first layer can be conventionally made by conducting paste (silver or gold), which is baked for drying and bonding to the substrate;

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- an IC chip 16 provided over the glass substrate wherein a pad of the IC chip is electrically connected to the second layer of the lead (col. 3 lines 65-68).

Schuster-Wolden et al. fail to disclose a lead comprising a first layer comprising silver and a second layer comprising indium tin oxide formed on the first layer.

Hart discloses (col. 4 lines 9-27) the transparent electrically conductive film comprising a laminate of silver having an electronic conductive function and ITO layer for anti-reflecting with forming oxide over silver layer.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify display as Schuster-Wolden et al. disclosed with a lead comprising a first layer comprising silver and a second layer comprising indium tin oxide formed on the first layer for anti-reflecting with forming oxide over silver layer.

2. Claims 4-9 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster-Wolden et al. (US4385976) in view of Hart (US4462883) as applied to claim 2 above, and further in view of Takeda (US4680226).

Takeda teaches (col. 2 lines 53-64) the adhesive comprising epoxy resin and metal particles that can be Ni for providing high electrical conductivity.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify display as Schuster-Wolden et al. disclosed with the adhesive comprising epoxy resin and metal particles that can be Ni for providing high electrical conductivity.

Response to Arguments

Applicant's arguments filed on 11/6/2003 have been fully considered but they are not persuasive.


Applicant's ONLY arguments are follows:

Hart is not in the field (display device) of Applicant's endeavor.

Examiner's responses to Applicants' ONLY arguments are follows:

The body of claims 2, 4, 7 and 10 describe the field of electrical connection between chip and substrate (not field of the display). The feature "display device" in the head of the claims considers as Preamble.

Furthermore, the specification does not disclose the unexpected result or motivation (why it is important) of a lead comprising a second indium-tin-oxide layer formed on the first silver layer.


TOANTON
PRIMARY EXAMINER

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Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (571) 272-2296. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0530.

HOAN C. NGUYEN
Examiner
Art Unit 2871

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